

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) A method for communicating a data signal over a high voltage power line having a center conductor carrying a high-voltage power signal having a voltage greater than one thousand volts, wherein the method comprises:
 - inducing an alternating current (AC) voltage from the high-voltage power signal having voltage greater than one thousand volts carried by the power line;
 - powering a transceiver device with the induced AC voltage; and
 - communicating the data signal with the transceiver device via the high-voltage power line.
2. (Previously presented) The method of claim 1, further comprising transmitting the data signal to an end user communication device via the transceiver device.
3. (Previously presented) The method of claim 2, wherein the data signal is transmitted over a fiber optic link.
74. (Previously presented) The method of claim 1, further comprising receiving the data signal from an end user communication device via the transceiver device.
8. (Currently amended) The method of claim 24, wherein the data signal is received over a fiber optic link.
96. (Original) The method of claim 1, further comprising filtering the induced AC voltage.
101. (Previously presented) The method of claim 1, further comprising filtering the data signal.
158. (Currently amended) A device for communicating a data signal over a high voltage power line having a center conductor and an insulator, wherein the high-voltage power line carries a high-voltage power signal having voltage greater than one thousand volts, the device comprising:
 - a transformer device having a winding and a core disposed in sufficiently close proximity relation to the high-voltage power line for inducing to induce an AC voltage from the high-voltage power signal carried by the high-voltage power line in the winding; and
 - a transceiver that receives power from the transformer device, and

wherein said transceiver communicates the data signal through the ~~high-voltage~~ power line.

¹⁵
~~16~~ 16. (Previously presented) The device of claim ~~8~~, further comprising:

a ferrite member disposed in proximity to the power line for increasing the inductance of a section of the power line; and

an enclosure for housing the ferrite member, the transformer device, and the transceiver device.

¹⁵
~~18~~ 18. (Currently amended) The device of claim ~~8~~, wherein the ~~high-voltage~~ power line ~~includes~~ comprises a center conductor, an insulator, and a second conductor external to the insulator, wherein the transceiver communicates the data signal through the second conductor.

¹⁶
~~17~~ 17. (Original) The device of claim ~~8~~, wherein the enclosure provides a ground potential.

¹⁵
~~20~~ 20. (Original) The device of claim ~~8~~, wherein the transformer device is a current transformer.

¹⁵
~~21~~ 21. (Original) The device of claim ~~8~~, wherein the transceiver is a fiber optic transceiver.

¹⁸
~~19~~ 19. (Currently amended) The device of claim ~~10~~, wherein the ~~high-voltage~~ power line includes an outer insulator external to the second conductor, said outer insulator includes a gap, and the transceiver is coupled to the second conductor at said gap in the outer insulator of the ~~high-voltage~~ power line.

¹⁵
~~22~~ 22. (Previously presented) The device of claim ~~8~~, wherein the power received by the transceiver is an AC power signal and the transceiver converts the AC power signal to a direct current (DC) power signal.

¹⁵
~~23~~ 23. (Previously presented) The device of claim ~~8~~, wherein the power received by the transceiver is an AC power signal and further comprising a low-pass filter for filtering the AC power signal provided by the transformer device.

¹⁵
~~24~~ 24. (Currently amended) The device of claim ~~8~~, further comprising a high-pass filter for filtering the data signal provided via the ~~external conductor~~ power line.

~~28~~ 28. (Currently amended) A method for providing communication of a data signal over a coaxial power cable having a center conductor carrying a ~~high-voltage~~ power signal

having voltage greater than one thousand volts, an outer conductor, and an outer insulator outside the outer conductor, the method comprising:

removing a portion of the outer insulator of the coaxial power cable;

coupling a communication device to the outer conductor of the coaxial power cable where the outer insulator is removed;

inducing a voltage from the ~~high-voltage~~ power signal having voltage greater than one thousand volts carried by the center conductor of the coaxial power cable; and

providing the induced voltage to power the communication device.

29 18. (Previously presented) The method of claim 18, further comprising grounding the outer conductor at a predetermined distance from the communication device.

30 20. (Currently amended) The method of claim 19, further comprising selecting the predetermined length to provide ~~an~~ a predetermined inductance value.

31 21. (Previously presented) The method of claim 18, further comprising providing at least one ferrite core outside the outer insulator to adjust an inductance.

32 22. (Previously presented) The method of claim 18, further comprising providing a gap in the outer conductor, wherein the communication device is communicatively coupled to the outer conductor on both sides of the gap.

33 23. (Previously presented) The method of claim 18, wherein the induced voltage is supplied to the communication device via a power supply.

24. (Canceled)

35 25. (Currently amended) A method for coupling a transceiver to an electric power line, wherein the electric power line has a center conductor that carries a first alternating current (AC) electrical voltage that is greater than one thousand volts and a concentric outer conductor having an insulative cover, wherein the concentric outer conductor carries a data signal, the method comprising:

inducing a second voltage from the center conductor, which carries a voltage that is greater than one thousand volts, to provide power to the transceiver; and

communicating the data signal from the outer conductor to the transceiver.

36 26. (Previously presented) The method of claim 25, wherein the data signal carried by the concentric outer conductor is supplied via an access point to the Internet.

37 ~~27~~. (Previously presented) The method of claim ~~25~~³⁵, further comprising removing a portion of the insulative cover to expose the concentric outer conductor.

38 ~~28~~. (Previously presented) The method of claim ~~27~~³⁷, wherein the removed portion of the insulative cover is removed from the periphery of the concentric outer conductor.

39 ~~29~~. (Previously presented) The method of claim ~~28~~³⁸, wherein the transceiver receives the data signal from and provides the data signal to a customer premise device.

40 ~~30~~. (Previously presented) The method of claim ~~29~~³⁹, wherein the customer premise device is at least one of the following: a computer, a telephone, and a facsimile machine.

41 ~~31~~. (Previously presented) The method of claim ~~30~~⁴⁰, wherein the transceiver is conductively coupled to the outer conductor to facilitate data communications therethrough.

42 ~~32~~. (Previously presented) The method of claim ~~31~~⁴¹, further comprising converting the second voltage to a direct current voltage.

33. (Canceled)

43 ~~34~~. (Previously presented) The method of claim ~~32~~⁴², wherein the inducing is accomplished using a ferrite core.

45 ~~35~~. (Currently amended) A system for communicating a data signal on the outer conductor of an electric power line carrying an AC power signal having a current signal and a first high-voltage that is greater than one thousand volts on a center conductor, comprising:

a transceiver in communication with the electric power line, wherein the transceiver is communicatively coupled to the outer conductor to provide communications therethrough, wherein the current signal on the center conductor induces a second voltage that supplies power to the transceiver;

a power supply that converts the second voltage to a direct current voltage, wherein the direct current voltage is provided to transceiver; and

wherein said transceiver is conductively coupled to the outer conductor to facilitate data communications therethrough.

36. (Canceled)

37. (Canceled)

46 ~~38~~. (Previously presented) The system of claim ~~35~~⁴⁵, wherein the data signal communicated through the outer conductor traverses an access point to the Internet.

47 ~~29~~ (Previously presented) The system of claim ~~35~~⁴⁵, wherein the power line has an insulative cover, a portion of which is removed.

48 ~~40~~ (Previously presented) The system of claim ~~39~~⁴⁷, wherein the removed portion of the insulative cover exposes the outer conductor.

49 ~~41~~ (Previously presented) The system of claim ~~35~~⁴⁵, wherein the transceiver receives the data signal from and provides the data signal to a customer premise device.

50 ~~42~~ (Previously presented) The system of claim ~~41~~⁴⁹, wherein the customer premise device is at least one of the following: a computer, a telephone, and a facsimile machine.

43. (Canceled)

44. (Canceled)

51 ~~48~~ (Currently Amended) The system of claim ~~35~~⁴⁵, wherein a core forms part of a transformer that provides said second voltage of said transceiver; and wherein said core is disposed substantially around the entire circumference of the power line.

46. (Canceled)

91 cont.
25 ~~47~~ (Currently amended) The device of claim ~~8~~¹⁵, wherein said core is disposed substantially around the entire circumference of said high-voltage power line carrying a voltage greater than one thousand volts.

11 ~~48~~ (New) The method of claim 1, further comprising converting the induced an AC voltage to a direct current voltage.

12 ~~49~~ (New) The method of claim 1, wherein said inducing is accomplished using a magnetically permeable core disposed substantially around the entire circumference of the power line.

4 ~~50~~ (New) The method of claim 2, wherein the data signal is wirelessly transmitted.

5 ~~51~~ (New) The method of claim 2, wherein the said transmitted data signal is a radio frequency signal.

6 ~~52~~ (New) The method of claim ~~51~~⁵, wherein the said transmitted data signal is a fiber optic radio frequency signal.

DOCKET NO.: CRNT-0011
Application No.: 09/924,730
Office Action Dated: August 13, 2003

PATENT

13~~53~~. (New) The method of claim 1, wherein the power line carrying the voltage greater than one thousand volts comprises a center conductor, an insulator, and a second conductor external to the insulator.

14~~54~~. (New) The method of claim 1, wherein the induced voltage is induced from the current carried by the power line.

26~~56~~. (New) The device of claim **15**~~7~~, wherein the transceiver is a radio frequency transceiver.

27~~57~~. (New) The method of claim **15**~~8~~, wherein said inducing is accomplished using a magnetically permeable core disposed substantially around the entire circumference of the power line.

34~~57~~. (New) The method of claim **28**~~18~~, wherein the induced voltage is induced from the current carried by the power line.

44~~58~~. (New) The method of claim **35**~~28~~, wherein the induced voltage is induced from the current carried by the center conductor.